

n. limit of its range in WY.—ROBERT A. PRICE, Botany Dept., Univ. Calif., Berkeley 94720.

REVIEWS

Vascular Plants of Montana. By ROBERT D. DORN, illustrations by JANE L. DORN. Mountain West Publishing, P.O. Box 1471, Cheyenne, WY 82003. 1984. \$7.95 + \$1.00 shipping.

Dorn's is a new and needed flora to satisfy both the herbarium and, particularly, the field botanist. The book (in paper covers) is small and light, well and pertinently, but sparsely, illustrated with nice line drawings, fully indexed to species, families and genera within families (arranged alphabetically), and has a well-illustrated glossary. It has a map of Montana counties and their combination into six areas used to describe plant distributions, and a very valuable map of the scattered distributions of the six kinds of floras found in Montana (Alpine, Rocky Mt., Pacific Northwest, Palouse Prairie, Great Basin, and Great Plains). The latter scheme is more meaningful, but the former is used in the text. Dot maps would offer a unique opportunity to document the latter, floristic classification.

The book is a masterpiece of condensation and composition. Does a word processor do better what a press once did? The book has only 276 pages, with a format of 13.7 × 21.6 × 1.4 cm and a corresponding light weight. Anyone who has carried Munz's California flora or Hulten's Alaska flora for several hundred miles on foot will appreciate Dorn's successful effort. Keys are full and serve as descriptions. They seem excellent. Aquatic and woody plants have their own separate keys, and for the Brassicaceae, Apiaceae, and *Astragalus* there are both flowering and fruiting keys. The characters used are simple, explained, evident, and separable. There are concise morphological descriptions for families and genera so a check can be made before keying to the species level. References in concise form are given for almost all genera. English names are supplied, but invention is not run into the ground. The habitat notes are concise and informative, not schematic. The illustrations are excellent in quality, informative, and helpful.

Again, plants know no political boundaries. The literature on many "North American" plants includes much published outside North America. Numerous Montana plants are also Alaskan, yet Alaska was physically and biologically a part of north-easternmost Asia and separated by vast ice sheets from North America during each glacial. The Soviet botanical literature is a rapidly expanding, very valuable mine of information on many North American plants. Hulten's Alaskan flora has been, and still is, a source of name corrections that are a prerequisite to an improved ecological and taxonomic understanding of Rocky Mountain plants, including several in Montana.

The literature on the distribution, ecology, uses, etc. of several Montana plants is hidden by some of the names Dorn uses (*Kobresia bellardii* for *K. myosuroides*, *Eriophorum polystachion* for *E. angustifolium*, *Carex stenophylla* or *C. eleocharis* for *C. duriuscula*, *Calamagrostis canadensis* for *C. purpurea* are examples). However, this is a carping criticism. Dorn has brought the nomenclature and taxonomy of Montana plants up to date for the most part (cf. *Alnus viridis* and *A. incana*, *Artemisia tridentata*

and its relatives, *Sphaeromeria*, *Triticeae*, *Leucopoa*, *Salix*, and *Heracleum*, among others).

A similarly excellent flora of the Black Hills of Wyoming and South Dakota was published earlier by the Dorns (1977) and is a real bargain (\$1.50 if ordered with the Montana flora). This "local" flora of 1260 species contains 80% of the flora of South Dakota and 59% of the flora of Wyoming.—JACK MAJOR, Botany Department, University of California, Davis 95616.

Aven Nelson of Wyoming. By ROGER L. WILLIAMS. xii + 407 pp. Colorado Associated University Press, Boulder, CO 80309. 1984. \$29.50. ISBN 0-87081-147-9.

This scholarly book is more than a biography of Aven Nelson. It is a brief history of systematic botany from about 1895 to 1945. It describes university life, particularly in the West, for this same period, and it touches on state politics. It also includes abbreviated biographies of many of Nelson's students.

The author, a historian specializing in French history, has taken the time to become familiar with the science of systematic botany to the point of personally collecting and identifying plants. This familiarity is reflected in his writing, yet he frequently provides helpful comments for those who are not taxonomists.

Those who know, or know of, the personalities in systematic botany from Nelson's time will easily relate to the book. Those who do not may find parts somewhat dry reading but should find the author's periodic reflections of interest. One example: "The posture of perfectionism, in academia, usually masks either indolence or fear." Teachers and researchers who read the book will see how well off they really are. Students can discover the qualities for success, qualities that are not taught in the university.

Aven Nelson was one of the first six faculty members at the newly-established University of Wyoming in 1887. His formal training was in English, but the University mistakenly hired two English professors. He had an interest in natural history, so he was appointed Professor of Biology. He founded the Rocky Mountain Herbarium and developed it in his spare time to be the largest in the interior West and one recognized world-wide. Nelson was instrumental in founding the Colorado-Wyoming Academy of Science and the American Society of Plant Taxonomists and served as the first president of each. He was the first interior westerner to be elected president of the Botanical Society of America. He was forced to retire at age 83 when the university instituted a mandatory limited service plan. Nelson was rewarded for his 55 years of service to the school, including 5 years as its president, with a pension of \$1500 per year.

The book also gives insight into personalities of other systematic botanists of Nelson's time including E. L. Greene, P. A. Rydberg, B. L. Robinson, M. L. Fernald, N. L. Britton, J. N. Rose, M. E. Jones, J. M. Coulter, L. M. Underwood, W. Trelease, T. S. Brandegee, and A. A. Heller. It provides a basic history of the development of an International Code of Botanical Nomenclature, a valuable asset for students majoring in systematics. The controversies are portrayed better here by Williams than they are, for example, in G. H. M. Lawrence's treatment in *Taxonomy of Vascular Plants*. The battle between the conservatives at the Gray Herbarium and the New York "radicals" frequently surfaces. There is also the struggle of western botanists trying to break free from the dominance of the eastern schools, just as the eastern botanists struggled with Europeans at an earlier date. Once, when M. L. Fernald strongly suggested to Nelson that he should come back East for study before describing new species and offered an invitation, Nelson wrote back, "I wish it were possible for me to accept it at once and to spend much time within the walls of the Gray Herbarium . . . One cannot always do as he would, but must do as he can."

In compiling the *New Manual of Botany of the Central Rocky Mountains* (1909), Nelson was forced to rethink the matter of what constitutes a species for all *practical*